American Farmer,

AND SPIRIT OF THE AGRICULTURAL JOURNALS OF THE DAY

"O Fortunatos nimium sua si bona norint
"Agricolas." . . . . *Virg.*

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CATTLE SHOW,

AGRICULTURAL EXHIBITION, PLOUGHING MATCH AND SALE,

At Govanstown, Md. on 18th, 19th and 20th Oct. 1841.

The Baltimore Co. Agricultural Society Will hold its Second Annual Fair on Wednesday, Thursday and Friday, the 18th, 19th and 20th days of Oct. 1843, at Govanstown, 4 miles from Baltimore, on the York road—The Society offers the following schedule of Premiums—Competition is solicited from abroad, for the premiums offered for Essays, Agricultural Implements and Machinery. All other premiums will be limited to the county and city.

PREMIUMS:

FARMS.

For the best cultivated Farm of not less than 80, nor more than 100 acres, except woodland, A Silver Goblet
For the best do. of 100 acres and upwards, except woodland, do
To the farmer who has improved his farm in the shortest time and most economical manner, do
Committee—Judson M. Duckett, Chairman, Wilson M. Carey, Jesse Garret.

CROPS.

For the best 15 acres of Corn, Sett of American Farmer
Do 5 do do Sett of Farmer's Cabinet
Do 15 do Wheat, Sett of Cultivator
Do 10 do do 4 yrs. sub. to Am. Farmer

To be accompanied with a full statement of the manure used, manner of preparing the ground, character of soil, description of seed planted, and manner in which the corn was cultivated; the certificate of three respectable gentlemen will be required, who saw the ground measured, as well as the grain.——To be referred to the Committee on Farms.

ESSAYS.

For the best Essay on the system of Farming best adapted to Baltimore county, including rotation of crops, and having reference to the productiveness as well as progressive improvement of the same, A copy of Loudon's Encyclopedia
To be referred to the Committee on Farms.

For the best treatise on the proper and most profitable method of applying lime, Sett American Farmer
Committee—Wm. F. Johnson, Ch., Micajah Merryman, Henry Carroll of My Lady's Manor.

For the best essay explaining the Cause of the Failure of the Rye Crop, with a remedy for the same, Sett of the Farmer's Cabinet
Committee—Edward P. Roberts, ch., Thomas Love and Aquila Talbot.

For the best Treatise on the proper management of an Apple and Peach Orchard, Loudon's Ency. on Gardening
Committee—R. Sinclair, sr. ch., Lloyd N. Rogers and Hillen Jenkins.

For the best Treatise on the most effectual mode of destroying the Carolina Pink, and other noxious weeds, 4 yrs sub. to Amer. Farmer, or Farmer's Cabinet.
Committee—John R. Cockey, ch., Elijah Marsh, and Thomas Kelso.

For the best treatise on the Hessian Fly, with a preventive against the ravages of the same, to be tested by a committee, $25 in Agricultural works
Committee—Gideon B Smith, ch'n, Dr D S Gittings, Dr Hy Wilkins, John Y Day, Horace Love.

For the best method of keeping Farm Accounts, A Gold Pen
Committee—Henry Mankin, ch'n, Samuel Wyman, J W Ward.

For the best treatise on the Rust, with a remedy, $25
Committee—Wm F Pearce, ch'n, Mr Raphel, Col. Edw Howard.

For the best treatise on the breed of Cattle, best suited to Baltimore county, 4 yr's sub. to American Farmer
Committee—John Gibson, ch'n, Wm Anderson, David Carlisle.

CATTLE.

For the best pair Working Oxen, A handsome Yoke
Committee—Saml Worthington, ch'n, Geo Beltzhoover and Isaac Webster.

For the best Cow, without regard to breed, Silver Butter Tub
Committee—J P E Stanley, ch'n, Robt Howard, D M Perine and John Pearce.

For the best thorough bred Durham Bull, 2 yrs old and upwards, Silver Goblet
For the best Durham Bull, between 1 & 2 yrs do Medal
For the best do Bull Calf, 4 mos to 1 yr old, do do
For the best do Cow, 2 yrs & upwards, Silver Butter Tub
For the second best do Certificate
For the best Durham Heifer 1 & 2 yrs old, Silver Medal
For do do do calf, 4 mos&1 yr old, do
Committee—J P E Stanley, ch'n, A B Kyle and Col Atlee.

For the best thorough bred Devon Bull, 2 years old and upwards, Silver Goblet
For do do between 1 & 2 yrs old, do Medal
For do do Bull Calf, between 4 mos and 1 yr old, do Medal
For do do Devon Cow, 2 years old and upwards, Silver Butter Tub
For second best do do Certificate
For best Devon Heifer, between 1 & 2 yrs old, do
For best do do Calf, 4 mos to 1 yr old, do
Committee—Geo Law, ch'n, Jas Sykes & Robt Howard.

For the best thorough bred Ayrshire Bull, 2 yrs old and upwards, Silver Goblet
For the best do between 1 & 2 yrs old, do Medal
Do do Bull Calf, 4 mos to 1 yr old, do Medal
Do do Ayrs'e Cow, 2 yrs old & upw Silver Goblet
2d best do do do Certificate
Do do do Heifer, 1 & 2 yrs old Silver Medal
Do do do do Calf, 4 mos & 1 yr do
Committee—Benj C Howard, ch'n, D M Perine and Frederick Harrison.

For the best thorough bred Alderney Bull, 2 years old and upwards, Silver Goblet
Do do Bull between 1 and 2 yrs old, Silver Medal
Do do Bull Calf, 4 mos to 1 yr old, do
Do do Cow, 2 yrs old and upwards, Silver Goblet
2d best do do do Certificate
Do do Heifer, 1 and 2 yrs old, Silver Medal
Do do Calf, 4 mos and 1 yr old, do
Same Committee.

For the best cross or country breed Bull, 2 yrs old and upwards, Sett of American Farmer
Do do Bull, 1 and 2 years old, Silver Medal
Do do do Calf, 4 mos and 1 yr old, do
Do do Cow, 2 yrs and up. Silver Ice Cream Ladle
2d best do do Certificate
Do do Heifer, 1 and 2 yrs old, Silver Medal
Do do do Calf, 4 mo and 1 year old, do
Committee—John Pearce, ch'n, Jeremiah Yellott, and Jno Worthington, Randallstown.

FAT CATTLE.

For the two best fat Cattle, Silver Goblet
For the two second best do do
Committee—Henry F Turner, ch'n, Jefferson Rusk, and Wm Eden.

SHEEP.

For the best South Down Buck, Silver Knife and Fork
do New Leicester do do do
do Merino do do do
do Saxony do do do
do 3 Ewes of the above breeds, Silver Cream Spoon
Committee—Tho B Cockey, ch'n, H B Chew, and Joshua M Turner.

SWINE.

For the best Boar, Silver plated Lard Lamp
For the 2d best do Silver Knife and Fork
For the best Breeding Sow, Pair silver plated Candlesticks
For the 2d best Breeding Sow Gold Pencil
Committee—John Yellott, ch'n, Hy Crowl and Fr. Cook.

HORSES.

For the best Stud Horse, for general purposes, Silver Goblet
For the best Brood Mare for general purposes, Pair silver plated Cake Baskets
For the best Jack, Silver Goblet
For the best Mule, Silver Medal
Committee—Henry Stevenson of Josiah, ch'n, John Baker and Henry Habbersett.

IMPLEMENTS OF HUSBANDRY.

For the best Furrow Plough, Silver Goblet
do Subsoil do do
do Hill side do do
The ploughs to be tested at the ploughing match.
Committee—H M Fitzhugh, ch'n, Saml Stone and Michl. Alder.

For the best Horse Power and Threshing Machine, $25
do Corn Sheller, Gold Pencil
do Corn and Cob Crusher, do
do Straw Cutting Machine, do
do Drill Barrow, do
do Steaming Apparatus, Silver Snuff Box
Premiums will be given for any other Implements of husbandry of peculiar merit enumerated above.
Committee—J T H Worthington, ch'n, Edward Rider, E. Parsons, John Rodgers, Ab Linthicum, jr.

PRODUCTS OF THE DAIRY.

For the best 2 lbs Butter, Pair silver Butter Knives
do sample Cheese, 5 lbs Silver Cheese Scoop
Committee—R Gilmer, jr. ch'n, J G Davis, D Barnum.

SILK.

For the best bushel of Cocoons, Gold Thimble
do lb Reeled Silk, Silver Knitting Sheath
do lb Sewing do Silver Needle Case
Committee—E L'Hernault, ch'n, Gideon B Smith and E P Roberts.

AGRICULTURAL PRODUCTS.

For the best acre of Potatoes, Silver Medal
do ¼ do Beets or Mangel Wurzel, do
do ¼ do Ruta Baga, do
do ¼ do White Turnips, do
Competitors for the above premiums will be required to produce the certificate of two gentlemen, stating the number of bushels raised per acre.

DOMESTIC MANUFACTURES.

For the handsomest home made Quilt, Gold Thimble
do best home made Sheeting, Gold Needle Case
do do Blanket, do do
do do fulled Linsey for men's wear, Gold Pencil
do do Carpet, Handsome Celery Glass
do pair do Stockings, Set silver Knitting Needles
do handsomest Rug, Pair of gold Scissors
do do silk or worsted Embroidery, do
Committee—Daniel Warfield, ch'n, Wm Tiffany and Jno Y Wethered.

FRUIT.

For the best peck of autumn Apples, Silver Fruit Knife
do do winter do do do
do do autumn Pears, do do
do do winter do do do
Committee—Dr Edmondson, ch'n, Edw Kurtz and R D Burns.

Any gentleman appointed on either of the above committees, declining to serve, is requested to apprise the Secretary of the fact, before the 10th of May next.

Premiums will be given for the best varieties of FRUIT, and the best 5 pounds of HONEY.

Certificates will be given at the discretion of the committees for any Stock, Farming Implements, &c. of superior merit, which may not, however, be thought entitled to one of the above mentioned premiums.

REGULATIONS.

Competitors for premiums are referred to the following rules and regulations of the Society, a compliance with which will be strictly required by the Executive Committee.

No applicant for any premium hereafter offered by the society, shall be entitled to said premium, unless said applicant shall be the owner of the object, property or article, entered

for such premium, at the time of exhibiting the same; excepting male animals owned out of the county, and brought into the same for the purpose of propagating their species, and which have been kept in the county for that purpose, for the *six months previous*. In such cases the animals may be entered for premiums by the person by whom said animals have been so kept: provided, however, that nothing in this by-law shall be construed to affect the rights of minor sons of members, who are now entitled to offer objects for premiums.

Competitors for premiums on Stock and other articles must cause an entry to be made on the society's book, at the office of the Recording Secretary, (J. B. H. FULTON, Ramsay's Hotel, Govanstown,) before 10 o'clock, AM. on the first day of the Show. Competitors in the Ploughing Match must enter on or before the 18th day of October.

All animals must be on the Society's ground, opposite Ramsay's hotel, by 10 o'clock, AM. on the first day of the Show, that they may be arranged in their proper places, and must remain until the afternoon of the second day, unless the committee of Arrangement consent to their removal at an earlier time.

Articles designed for exhibition or premium, must be distinctly labelled with the owner's *name* and *residence*. They *must* be placed under the control of the Committee of Arrangements, by 10 o'clock of the first day of the exhibition, at the hotel, and not be removed until the close of the Fair.

The Committee may withhold a premium when there is no competition, or when the animal or article is not in their opinion worthy of reward.

The several awarding Committees will enter upon the discharge of their duties at 12 o'clock of the first day; and on the completion of their awards, will prepare accurate lists of the same, to be handed to the Secretary by 9 o'clock, AM. on Thursday, the second day.

Competitors for premiums on Farms, must cause an entry to be made with the Recording Secretary, (J. B. H. Fulton, Baltimore city,) on or before the 1st of June. The reviewing committee will give due notice to competitors, at what time their farms will be viewed.

Competitors are referred to the following by-law, which will govern the committee in awarding premiums on farms, viz: That reference will be had "to Crops, Barns, Trees, Garden, Cattle, and other Stock, and Farming Utensils, without reference to the cost of buildings."

"No member of the Viewing Committee shall be entitled to enter his farm as a competitor for premiums on farms, while serving upon said committee."

The Ploughing Match will take place at 10 o'clock, AM. on Friday, the 20th day of October.

The sale of stock will commence at 11 o'clock, AM. of the same day.

It is required that all Machines, Horse Powers, &c. shall be on the ground the day previous, when the Committee of Arrangement will be in attendance.

Persons from a distance, having improved stock of any description for sale, are invited to attend—The society will have an auctioneer to conduct all sales free of charge—Secure pens will be provided for all stock sent for exhibition—An abundant supply of provender may be had on the ground.

The Executive Committee confidently hope that all will manifest a willingness to contribute to the interest of the occasion, by sending any thing which may possess merit, altho' not included in the above schedule; and as a room will be appropriated exclusively to the display of Needle Work, &c. they rely upon the Ladies to make it an interesting part of the exhibition.

ANNUAL MEETING, &c.

An Address will be delivered on Thursday, the 19th Oct. at 12 o'clock, and the premiums distributed immediately afterwards.

The Annual Meeting of the Society for the Election of Officers will be held on Friday, 20th, at 3 o'clock, PM.

OFFICERS OF THE SOCIETY.

President—John Ridgely, of Hampton.

Vice Presidents.

Gen. John Spear Smith,	Ho. Hollingsworth, Esq.
Gen. T. E. Stansbury,	Col. Joseph Jameson.
Wilson M. Carey, Esq.	John Y. Wethered, Esq.
Col. Nicholas M. Bosley,	Robert A. Taylor, Esq.
Hon. J T H Worthington,	George Law, Esq.
Hon James Turner,	Hy. Carroll, Esq. of My La-

Treasurer—James Howard, [dy's Manor.

Corr. Secretary—H. C. Turnbull

Record. Secretary—J B H Fulton.

Executive Committee.

David Stuart,	William Jessup,	Henry M Fitzhugh,
Edward Rider,	Thos T. Gorsuch,	Wm G Howard,
James Carroll, jr.	John M Duckett,	Thomas J Hillen.

JOHN B. H. FULTON, Rec'g Sec'y.

Destruction of Stock in the West—The destruction of Stock in the West during the past winter and early spring, from *starvation*, is immense. Such things should not be.

From the Albany Cultivator.

Report of Dr. Playfair's Lecture

Before the Royal Agricultural Society of England.

Dr. Playfair stated that the object of the lecture was, to point out in what manner the principles of physiology, (especially those which had been lately developed by the chemical researches of Liebig, might be applied to the grazing and fattening of cattle. In the first place, he should endeavor to give a clear conception of what the principles of physiology were, that were involved in the feeding and growth of animals.

Vegetables, in their growth, derive all their food from the mineral kingdom—principally from the air—which had been called a gaseous mineral; whilst animals derived their principal nutriment directly from the vegetable kingdom. Vegetables effected many chemical changes in the food they took up—animals, few.

Gluten and albumen are the nutrient principles of plants, and in chemical composition they are identicle with the albumen of the white of an egg, of the muscles of an ox, or the blood of a sheep. By identity was not meant similarity, but positively the same thing. The albumen of blood, of muscle, and of an egg, differed in physical but not in chemical characters. The composition of these substances, as analysed by various chemists from the animal and vegetable kingdom, as seen in the following table, prove their identity:

	Gluten. Bussingault.	*Casein.* Scherer.	*Albumen.* Jones.	*Ox-blood.* Playfair.	*Ox-flesh.* Playfair.
Carbon,	54.2	54.1	5.5	54.19	54.12
Hydrogen,	7.5	7.1	7.	7.5	7.89
Nitrogen,	1 4	15.6	15.7	15.72	15.71
Oxygen,	24.4	23.2	22.1	22.59	21.56

These analyses do not differ more than the analysis of the same substance. Plants, in fact, contain within them the flesh of animals, and all the animal organization does in nutrition is, to put this flesh in the right place. But animals take up with their food other constituents of plants which contain no nitrogen; such are starch, sugar, gum, &c. These are not nutritive principles; they do not assist in making the flesh of animals; and when animals are fed on these alone, they die. But animals possess a certain degree of heat, and their bodies have generally a temperature above that of the atmosphere—about 100 degrees of Fahreheit's thermometer.

Whence then comes this heat? From the burning of the sugar, starch, gum, &c. The air that animals expire is carbonic acid, the very gas that is produced by the burning of wood or charcoal in a fire. Charcoal is carbon, and animals take in daily a large quantity of carbon in their food. It is the burning or combustion of this substance in the body, that produces animal heat. In hot countries, animals on this account, take less carbon. The food of the East Indian contains only about 12 per cent. of carbon, whilst that of the Greenlander contains 70 per cent. The depraved taste of the Greenlander, who drinks train-oil and eats tallow candles by the dozen, might be pitied or wondered at; but it is necessary to his healthy existence. Another reason for animals acquiring carbonaceous food in cold climates is, that the air is more condensed, and the same measure contained a greater quantity of oxygen; that gas being the agent which, by uniting with the carbon and forming carbonic acid, gave out the heat. Strong exercise also demands a large supply of carbonaceous food, on account of the oxygen taken in during the hard breathing thus produced. Oxygen, when once taken into the system, never escapes uncombined, and would destroy the whole fabric of the body unless a fresh supply of material was given. Clothes, by keeping in animal heat, rendered less carbonaceous food necessary in order to keep the body up to its proper temperature. The following table exhibits the principles of food necessary for the two great processes of life—nutrition and respiration:

Elements of Nutrition—Vegetable Firbrine,
" Albumen,
" Casein,
Animal Flesh,
" Blood.

Elements of Respiration—Fat,
Starch,
Gum,
Sugar,
Wine,
Spirits,
Beer.

If it were not for some power or force within the animal fabric, it would soon become a prey to the chemical action of oxygen. The force that withstands this action is vitality—a principle independent of the mind, and which constantly opposes the destructive chemical laws to which the body is subject. Disease is the temporary ascendancy of the chemical over the vital force. Death is the victory of the chemical force. A dead body exposed to the action of oxygen is soon resolved into its primitive elements—carbon, hydrogen, and nitrogen, in the form of carbonic acid, ammonia and water; and these are the elements from which plants again prepare materials for the living body. These remarks will explain many facts known to the agriculturist, and will assist him in insuring more certainly many of the objects of his labors. It is very well known that cattle do not fatten so well in cold weather as in hot. The reason is this: The fat is a highly carbonized substance, formed by the animal from its carbonaceous food. In cold weather, the carbon in this food is consumed in keeping up the heat of the animal, which is at that season more readily carried off. This is also illustrated in an experiment made by Lord Ducie, at Whitfield. One hundred sheep were placed in a shed, and ate 20 lbs. of Swedes each per day; another hundred were placed in the open air, and ate 25 lbs. of Swedes per day; yet at the end of a certain period the sheep which were protected, although they had a fifth less food, weighed three pounds a head more than the unprotected sheep. The reason of this is obvious: the exposed sheep had their carbonaceous food consumed in keeping up their animal heat. Warmth is thus seen to be an equivalent for food. This is also illustrated by the fact that two hives of bees do not consume so much honey when together as when separate, on account of the warmth being greater; and they have less occasion for consuming the honey, which is their fuel. Cattle, for the same reason, thrive much better when kept warm, than when exposed to the cold.

The cause of animals getting fat is, that they take in more carbonaceous food than they require for producing animal heat; the consequence is, that it is deposited in the cellular tissue in the form of fat. Fat is an unnatural production, and its accumulation is not necessary for the health of the body. When stored up, however, it will serve the body for keeping up its animal heat, and by this means its life, till it is all consumed. An instance is related of a fat pig having been kept without food for 160 days, sustaining life by its own fat.

Another element necessary to be taken into consideration in the fattening of animals, is motion or exercise. Every action of the body—nay, every thought of the mind, is attended with chemical change; a portion of the deposited tissues are thus being constantly consumed. It is on this account that when animals are fattened, they are kept quiet and still. The cruel practice of fattening geese by nailing their feet to the floor, and of cooking pigeons and chickens before they are killed, arises from a knowledge of this fact. When prizes were given by our agricultural societies for fat, and not for symmetry, animals were strictly prevented from taking any exercise at all. Mr. Childers found that sheep which were kept warm and quiet, fattened much faster than those that were allowed the open air and action. It is very difficult to fatten sheep and oxen in July, on account of the flies, which, stinging them, keep them in a state of constant motion. The Cornish miners, on account of the laborious nature of their occupations, consume more food than laborers with lighter work. During the late riots in Lancashire, the poor unemployed operatives found out that exercise and cold made them hungry; accordingly they kept quiet in bed and heaped upon them all the covering they could find. Englishmen in the East Indies, are obliged to take a great deal of exercise, because they will insist on eating and drinking highly carbonized foods; and the heat of the climate not allowing the escape of much heat from the body, they are obliged to take in by exercise, the oxygen of the air, in order to destroy the carbon which would otherwise accumulate in the system, and produce liver disease. In the Scotch prisons, the quantity of food given to the prisoners is regulated by the kind of work on which the prisoners are engaged—the hardest workers having the most food. The reason of the flesh of the stag becoming putrid shortly after its death, arises from the quantity of oxygen which it takes into its system during the hard breathing of the chase. A hunted hare, for the same reason, is as tender as one that has been kept for a fortnight after being shot. The reason is the same. In both

cases, the action of the oxygen on the flesh produces approaching decomposition—in the one, quickly; in the other, slowly. Bacon, on the same principle, was, at one time, rendered more delicate by whipping the pig to death. Epileptic fits produce great emaciation, on account of the violent action to which they expose the body.

Lord Ducie has performed some experiments highly illustrative of the foregoing general principles, and which also indicated what might be expected from their application to the practice of grazing:

1st experiment. Five sheep were fed in the open air between the 21st of Nov. and the 1st of Dec.; they consumed 90 lbs. of food per day, the temperature of the atmosphere being about 44 deg. At the end of this time they weighed 2 lbs. less than when first exposed.

2d experiment. Five sheep were placed under a shed and allowed to run about, at a temperature of 49 deg.; they consumed at first 82 lbs. of food per day; then 70 lbs.; and at the end of the time had increased in weight 23 lbs.

3d experiment. Five sheep were placed in same shed as in the last experiment, but not allowed to take any exercise; they ate at first 64 lbs. of food per day; then 58 lbs.; and increased in weight 30 lb.

4th experiment. Five sheep were kept quiet and covered, and in the dark: they ate 35 lbs. a day, and were increased 8 lbs.

These experiments prove very satisfactorily the influence of warmth and motion on the fattening of cattle.

Dr. Playfair then stated that he should proceed to examine the different kinds of food of cattle. The food of cattle is of two kind—azotised and unazotised—with or without nitrogen. The following table gives the analysis of various kinds of food of cattle in their fresh state:

Lbs.	*Water*	*Organic matters.*	*Ashes.*
100 Peas,	16	80½	3½
" Beans,	14	82½	3½
" Lentils,	16	81	3
" Oats,	18	79	3
" Oatmeal,	9	89	2
" Barley meal,	15½	82½	2
" Hay,	16	76½	7½
" Wheat straw,	18	79	3
" Turnips,	89	10	1
" Swedes,	85	14	1
" Mangel wurzel,	89	10	1
" White carrot,	87	12	1
" Potatoes,	72	27	1
" Red beet,	89	10	1
" Linseed cake,	17	75½	7½
" Bran,	14½	80½	5

A glance at this table would enable a person to estimate the value of the articles as diet. Thus every 100 tons of turnips contain 90 tons of water. But the value of the inorganic and organic matters which these foods contained, differed. Thus Mr. Rham states that 100 lbs. of hay are equal to 339 lbs. of mangel wurzel. It would be seen by the table, that that quantity of hay contained 76 lbs. of organic matter, whilst the mangel wurzel contained only 34 lbs.

One result of feeding animals on foods containing much water is, that the water abstracts from the animal a large quantity of heat, for the purpose of bringing it up to the temperature of the body, and in this way, a loss of material took place. The mode proposed by Sir Humphrey Davy, of ascertaining the nutritive properties of plants, by mechanically separating the gluten, is unsusceptible of accuracy. The more accurate way is to ascertain the quantity of nitrogen, which being multiplied by 6-2, will give the quantity of albumen contained in any given specimen of food. The following is a table of the equivalent value of several kinds of food, with reference to the formation of muscle and fat; the albumen indicating the *muscle*-forming principle—the unazotised matters indicating the *fat*-forming principle:

Lbs.	*Albumen.*	*Unazotised matter.*
100 Flesh,	25	0
" Blood,	29	0
" Peas,	29	51½
" Beans,	31	52
" Lentils,	33	48
" Potatoes,	2	24½
" Oats,	10½	68
" Barley meal,	14	68
" Hay,	8	68½
" Turnips,	1	9
" Carrots,	2	10
" Red beet,	1½	8½

The analyses in this table are partly Dr. Playfair's and partly Boussingalt's. The albumen series indicate the flesh-forming principles, and the unazotised series indicate the fat-forming principles. By comparing this table with the former, it will at once be seen which foods contain not only the greatest quantity of organic matter, but what proportion of this organic matter is nutritive, and which is fattening; or that which furnishes living tissue and that which furnishes combustible material. In cold weather, those foods should be given which contain the larger proportion of unazotised matters in order to sustain the heat of the body. Thus it will be seen that potatoes are good for fattening, but bad for fleshening. Linseed cake contains a great deal of fattening matter, and but little nutritive matter; hence, barley meal, which contains a good deal of albumen, may be advantageously mixed with it. Dumas, a French chemist, states that the principle of fat exists in vegetables, as in hay and maize, and that, like albumen, it is deposited in the tissues unchanged. But Liebig regards fat as transformed sugar, starch, gum, &c., which has undergone a change in the process of digestion. This is why linseed cake is fattening: all the oil is squeezed out of the seed, but the seed-coat, which contains a great deal of gum, and the starch of the seed is left, and these are fattening principles. The oxygen introduced by respiration into the lungs, is destined for the destruction of carbonaceous matter, but there is a provision made for taking it into the stomach with the food, and this is done by the saliva. The saliva is always full of bubbles, which are air bubbles, which carry the oxygen of the atmosphere into the stomach with the food. The object of rumination in animals is the more perfect mixing of the food with the oxygen of the air. This is why chaff should not be cut so short for ruminating, as for non-ruminating animals, as the shorter the chaff is, the less it is ruminated, and the less oxygen it gets. Chaff is cut one inch for the ox, half an inch for the sheep, and a quarter for the horse. Some might, in consequence of this, suppose that cutting food is then of little use; but when it is considered that rumination is a strong exercise, or that an animal will not be eating more food that is ruminating, it will easily be seen how cutting facilitates fattening. In order that food may be properly ruminated, it requires a certain amount of consistency and bulk; hence all watery foods, as turnips and mangel wurzel, should be mixed with straw. The opinion is very correct, that an animal "cannot chew its food without straw." An important inorganic constituent of the food is salt; it is a chloride of sodium. Whilst the chlorine goes to form the gastric juice, which is so important an agent in digestion, the soda goes to form the bile, which is a compound of soda. The bile is, in fact, a secondary combination, by which the carbonaceous matter is brought in contact with the oxygen, in order to be burnt. It is thus that common salt becomes so important and necessary an article of diet. In the series of changes by which the oxygen of the air is brought in contact with the carbonaceous matters in the body, iron plays an important part, and is hence one of the necessary ingredients of animal food. There are two oxides of iron—the peroxide and the protoxide; the first containing a large quantity of oxygen, the second a smaller quantity; the first, on being introduced into the blood, gives up a portion of its oxygen to the carbonaceous material of the bile, carbonic acid and protoxide of iron being formed; these two unite, forming a carbonate of the protoxide of iron, which, on being carried to the lungs, gives off its carbonic acid, and the protoxide of iron absorbing the oxygen brought into the lungs by respiration, forms again a peroxide, which again goes into the circulation, and meeting with carbonaceous matters of the bile, unites with them, and produces again and again the same series of changes. The small quantity, then, of inorganic ingredients in the food, performs very important functions; and in the absence of them, animals would die.

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Remarks by the Editor of the N. E. Farmer.

The preceding article we gladly lay before our readers, believing they will take much interest in seeing the course which scientific men are taking, in the hope of doing good service to agriculture, and to man. The experiment with sheep, which shows that quiet and warmth are favorable to growth, and may be in part a substitute for food, shows nothing different from the result to which observation has long since led many a common farmer; but *the why—the reason*, has not been known. This reason, according to Liebig, is, that in cold weather more of the carbon of the food is required to keep up the animal heat; and also that when *in exercise*, more of the carbon must be consumed, because more oxygen is taken into the system by the quicker or deeper breathing;—this rapid consumption would soon raise the animal heat too high, were there not provision for letting it off through the skin and other ways. What is thus let off is wasted, so far as relates to growth. From the experiment we learn nothing but *the reason* of results which have long been known.

The tables in the above article give us valuable information as far as it goes; and it gives hope of something more. The whole article, however, stops short of where we wish science to lead us. We are told how many pounds of matter there are in an hundred pounds of potatoes, that will go to make muscle or flesh as distinguished from *fat*; also how many pounds that may go to make *fat*. All this is well. But there are other things the action of which is not told, viz: the water and the ashes—or rather the salts in the ashes. Does the water in potatoes have upon an animal precisely the same effect as would be produced by the same quantity of pure water drank in separately?—and what salts are found in the ashes of each kind of food—in what quantity, and what is their effect upon the animal that consumes the food? These are questions not yet answered, but which must be answered before chemistry does all that we ask at her hands.

Taking the water from the articles named in the foregoing tables, and calling the remainders of equal value as food, pound per pound, the calculation, if we have made no mistake, would show results nearly as follows.

	Bushels.
100 lbs. of hay equal in worth to potatoes	5
" " " turnips	14
" " " beets	14
" " " white carrots	12
" " " ruta bagas	10
" " " oats	3
" " " barley meal	2

Now estimate hay at 80 cts. 100 lbs.,

	Cents.
Potatoes will be worth per bush.	16
Turnips, " "	5 2-3
Beets, " "	5 2-3
White carrots, " "	6 2-3
Ruta bagas, " "	8
Oats " "	27
Barley meal, " "	40

These figures would make hay the most economical food. Practically, however, hay will not be so valuable comparatively, as it appears here. This may be owing in part to the fact that a portion of the hay passes through animals undigested; and in part, perhaps, to the quantity and character of its salts. The animal's stomach will often do its work much less thoroughly than the chemist's crucible, and we should expect the chemist to find more nutriment in hay and oats than the animal can exact. The opinion of Dr. Playfair that 6 bushels of turnips may be equal in value as food, to pounds of hay, may be *near* the truth—but we should think that the hay would be found worth a little the most: we would take seven bushels. Our table values then will be—

100 lbs of hay equal to potatoes,	2 1-2 bush.
" " " turnips,	7 "
" " " beets,	7 "
" " " white carrots,	6 "
" " " ruta bagas,	5 "

The hay being at 80 cts., we shall have the following:

Potatoes	worth	32 cts. per bush.
Turnips	"	11 1-3 "
Beets	"	11 1-3 "
White carrots,	"	13 1-3 "
Ruta bagas,	"	16 "

From this it will follow, that among the roots (?) potatoes will be most profitable in those sections of the country where the crop is usually a safe and good one. But on many farms, the 5 bushels of ruta bagas can be produced at less expense than the 2 1-2 of potatoes. On many farms, also, the 6 bushels of white carrots will cost not more than the 2 1-2 of potatoes.

From the tables in the article above, it will appear that for fattening, potatoes are best; while for giving muscle and strength, they are the poorest. Carrots and barley meal are best for working animals, among the substances named.

We wish some competent chemist would give us the

analysis of Indian meal and of ruta bagas. We will venture the prediction, from observation, that the ruta baga will be found best of all the roots for giving muscle—that they are best for working animals. But the analyses will not satisfy us until we find what the ashes contain. The salts, probably, have much greater action, in proportion to their quantity, upon the animal system, than do the organized matters in the roots. Let chemistry show us their constituents and operation, and we can the better judge whether its teaching are supported by *our* experience.

From the American Agriculturist.

A Maryland Farm.

Agricultural Capital.—I have frequently, in reading over the foreign agricultural journals, been astonished at the lavish expenditure of capital on the landed estates in England, to promote their fertility, reclaim them from waste, or bring hitherto worthless tracts under cultivation, wall them in from the sea, and otherwise render them more productive; but on further examination my wonder has ceased, when I learn that in almost all cases of such improvement, the capital thus expended has produced a liberal additional interest on its investment. Probably no department of British industry receives so liberal an outlay of capital as that of its agriculture, affording in this particular a marked contrast to our American agriculture, which scarcely anywhere receives, and even then grudgingly, but an investment of moneyed capital sufficent to render our lands habitable, by a large proprietor. How often do we see proprietors with large landed estates lying in a ruinous, dilapidated condition, with but a few meager acres carelessly cultivated, around their dwellings, which last appendage may be even elegant and costly, while they have tens of thousands invested in some bank, or insurance company, or in bonds and mortgages, which, if withdrawn, and intelligently invested in the improvement of their estates; what noble revenues, as well as delightful employments would result from it, instead, as is often the case, of wasted fortunes from the insolvency of their debtors, and of personal ruin to many a worthy and, under different circumstances, promising young man, resulting from idleness and dissipation, arising simply from want of employment!

Yet, with all our experience in these matters, hardly an individual can, at this time, make an investment of capital in agriculture, but, ten to one he will be looked at with suspicion by his moneyed friends and associates, and either his judgement or his credit, according to his expenditure, is at once suspected. This we know to be all wrong, and the result of a perverted and false estimate of the true value of agriculture, and its safety, and sure reliance for support, in all times and seasons, and the steady virtue and integrity of those who rely upon its bounties. How many, and many young men have I known, sons of rich painstaking fathers, who, indulged in habits of ease or of loose attention to business while boys, yet with sanguine expectations hereafter, on attaining their majority had been placed in business with a handsome capital, and in two, three, or five years, as the case may be, had lost every farthing, and thousands besides, the property of others who had confidingly trusted to their good management! Yet if these fond fathers had invested the same sums in good farms or plantations, and given their sons a plain agricultural education, ten to one they would have proved prudent, useful, thriving citizens, and good, contented, and happy farmers, instead of, at an early age, broken down, disappointed, and unhappy men. And all this from a false, imperfect estimate of the agricultural profession, and its dignified and sturdy resources.

A Maryland Farm.—But to the main subject of my letter, instead of a homily on false principles and habits. In a brief journey to the seat of Government, last June, when arrived at Baltimore, I made a diversion from my route, to visit a gentleman located near the Ohio railroad, about thirty miles west of the city, and to view his fine estate, and see his herd of beautiful Devon cattle, for the care of which he has long been celebrated. I found him on his farm of some seventeen or eighteen hundred acres of fine rolling land, a garden amidst a poorly cultivated yet pleasant country, years ago worn down by hard cropping of corn, wheat, and tobacco, but of good natural soil and capabilities. Here, retired upon his estate, with a plain yet beautifully-situated dwelling and outbuildings, and all the necessary appliances for a gentleman of wealth, education, and leisure, he has for many years lived and improved his estate, until it has become one of the most valuable in the country; and from a condition which, when he first began its cultivation, was sterile, worn out, and almost worthless. I spent a day in rambling with him over his fine domain, and never have I been more pleased and instructed. As this is a full and successful illustration of what may be done in almost all our Atlantic states, in the improvement of worn-down soils, I trust I shall be excused for giving it somewhat in detail. When the proprietor first located on his farm it was entirely unproductive; yielding no crops, giving no manures, and possessing no resources of fertility, other than the muck or swamp-holes, occasionally interspersed among the woods and waste lands of the estate. After thoroughly examining the soil which was found to be of various kinds, but chiefly a loose friable earth, based on a clay bottom, with occasional tracts of stiff clay on the surface, he purchased a limestone quarry a dozen miles distance on the railroad, erected two large kilns at the depot near the estate, and went vigorously to work in getting out the stone, roading it to his kilns, and burning it. This material, delivered on the farm, costs on an average twenty cents a bushel. The bushes and straggling woods were cut and made into fuel, the fields were squared out and put into shape, and the quick lime applied at once upon the land, in quantities of from fifty to two hundred bushels to the acre, no matter at what season of the year. When the lime was ready it was applied, by dropping it in heaps of five or six bushels each, and, as soon as sufficiently slaked by the weather, carefully spread on the soil. A great part of the land was so stertile that it had no sod upon it, and was sadly disfigured with gulleys made by the washing of the rains. In such fields as had a tolerable sod of grass, a slight dressing of barn or stable manure was obtained and applied with the lime, which being ploughed became at once productive; but where no manure was placed in aid of the lime, it was left untouched to dissolve with the rains and snow, and incorporate as best it might with the soil. Under this latter process the soil became gradually grassed over, and in two to four years, a fine coat of native blue grass (*poa pratensis,*) and white clover (*trifolium repens,*) affording beautiful succulent pasture, covered the ground. When this grass coating is accomplished, the land is in proper condition for cropping, and, with a thorough ploughing, yields abundantly of all the grains and grasses grown in this climate. Where there is no vegetable matter in the soil for the lime to act upon, I conceive the lime must have drawn most of the fertilizing matter from the air, condensing the ammonia therein contained, which is brought to it by the snows and rains. Of course all that is thus procured, is so much added to one's wealth by a very moderate outlay. It also seems to predispose the materials of the soil to form those associations and tendencies, which enable it to produce vegetation when in no condition to do so before.

In ranging over the estate, we examined particularly the land, from fields limed years ago, and in the fulness of the production, to those yet white with its recent application, and just looking green with the fresh verdure of the young grass. One field contained fifty acres of the most beautiful wheat I ever saw, promising to yield full forty bushels to the acre. Another, of seventy acres, was newly planted in Indian corn, and had a fine chocolate-colored soil; which had produced its sixty and seventy bushels per acre. The oat fields looked rank and fresh, and the grass lots for hay were, many of them, thus early, lodging with the over-growth of their burdens. Such timothy and clover, and such orchard-grass meadows, are rare in that region. In short, by the application of lime in this manner, or without the aid of stable manures, all the cultivated lands were teeming with fertility and abundance. Hundreds of acres thus limed for years, now in beautiful pastures, had been untouched by the plough, and were grazed by herds of cattle, sheep, and horses, rioting in its luxuriance. Eleven hundred acres had thus been limed and new fields were waiting for this fertilizing stimulant, still in the process of application. I saw large tracts of land so sterile that no vegetation grew upon it, not even grass or weeds, separated only by a fence from those bearing the richest herbage. One had been limed—the other not.

I had never seen a specimen of agricultural improvement which had pleased or interested me more than this; and when, in addition to this teeming abundance, all the appliances of rural luxury and independence, buildings, orchards, groves, and delightful scenery, were added, the picture was full to admiration. Yet all this beauty, fertility, and abundance, was created by the simple application of scientific principles, with the aid of moneyed capital, to this body of otherwise inert and lifeless soil. The propietor told me that his friends and neighbors had jeered, ridiculed, and blamed him for thus squandering, as they termed it, his money on such worthless experiments; but the result has equalled his warmest anticipations, and he has now the solid pleasure of looking at an estate, which, when he took possession of it, was absolutely worthless in its income, and not saleable at five dollars the acre, now worth eighty or a hundred. In addition to this improvement of the soil, ten or a dozen miles of durable and substantial post-and-rail fences of chesnut and cedar have been built, separating the farm into large and convenient fields, with commodious lanes and entrances leading from the mansion-house and farm-buildings. Ample hay and grain barns are erected in many of the enclosures, for securing the crops and feeding the stock; and altogether this may be termed a *pattern farm* of the highest order.

The question may naturally enough here be asked, how should this remarkable improvement occur in this country, and by one who was not bred a practical farmer? The answer is a simple and easy one: by the application of right principles to agricultural improvement. This gentleman possessed education, enlarged and intelligent views of agricultural improvment, had travelled extensively abroad, and profited by his foreign observations; and after returning to his native state, instead of slothfully sitting down in idleness and inglorious ease, at once applied himself to the improvement of his property, and in giving an example to his fellow-citizens of incalculable value. And yet millions of acres in that fine region, now yielding little or no income, might, by a very moderate outlay of capital, be made equally productive. But more of this hereafter.

Devon Cattle.—By far the best and most perfect herd of Devons I ever saw is kept on this estate. The originals of these fine animals were imported about the year 1819, as a present from the late Earl of Leicester, then Mr. Coke of Holkam, England, to Messrs. Patterson and Caton, two distinguished gentlemen of Baltimore. Not being practical agriculturists, their choice animals met with indifferent treatment in their breeding, and for many years were neglected among the stock of their farms. But falling some years ago into the hands of their present proprietor, who readily saw their value for the locality and soil of the estate, he imported from Mr. Bloomfield (a principal tenant of Lord Leicester, and, indeed the *real* breeder of the fine Devon stock, for which his Norfolk estate has become so celebrated) a most valuable bull, by which his stock was in a few years brought up to a standard, excelled probably by few herds of Devon cattle in England, and certainly by none in this country. A year and a half ago he made another importation of a two-year-old bull, certainly the most perfect of his kind, in symmetry and good points, that I ever saw. To a size abundantly large for all purposes of Devon stock, he united a fineness of touch, a delicacy of limb, and a vigor of constitution, such as I had not before imagined could belong to this ancient family of stock. In truth such a Devon I never saw! His color a deep mahogany, with the beautiful rich yellow ring round the eye, and the elegant slender white horn! All my prejudices against the Devons as being "pretty *little* cattle enough," were dissipated, and I at once acknowledged their value for the lighter soils of our country. In the pasture with this young bull were eighteen or twenty thorough-bred cows, large and beautiful; all a deep mahogany color, and hardly to be distinguished from each other, so much in shape were they alike. Their udders were large, with fine silky handling and genteel taper teats; and indicating by apppearance good milking qualities. This their proprietor assured me they possessed in fully an equal degree to the common cows of our country, and probably superior. In another field were a score or two of thrifty young steers and heifers, the produce of the cows, and near by a home lot with a number of young calves of the present year.

I need hardly say, after thus expressing my admiration, that, before I left, I purchased three or four select young animals of this valuable herd, from which, with those I before possessed, will, I trust, in a few years, give me a herd of Devons equal to any other to be found. For general cattle purposes I advocate the Short-horns. They are, all in all, the finest cattle. But there is a very general and, in my opinion, obstinate prejudice in our country, particularly among the northern people and their descendants, for *red* cattle, especially *red* oxen; and your true New England men, when they work oxen altogeth-

er would as soon be seen driving a mule and a goat together, as a pair of roan or spotted cattle. No—*red* is the color, and *red* they will have, and *red* they *shall* have, if I can aid them to it; and no other breed gives it in such deep, rich, unalloyed luxury as the Devons. This breed has sufficient size for working cattle, and in beauty of form is perfect.

Here too I discovered several specimens of beautiful South Down sheep, from the select imported flock of Mr. Rotch, of Otsego. Some fine blood mares and colts, to which has been added one of my own thorough-bred mares of the Barefoot stock, now in foal to Bellfounder. Even the barn-door fowls of the place were of choice and selected stock, being a cross of the large Bucks county fowl of Pennsylvania and the game breed; and they now rejoice in the acquisition of some nice young Dorkings.

But I weary your patience. To say that I was charmed, delighted, and exceedingly instructed, by my visit to this luxurious retreat, and much indebted to the refined hospitality of my esteemed host, would be barely common place. A proper delicacy forbids my saying more, and I would hardly have gone so much into detail, but for the rare and profitable example of highly improved agriculture here presented. L. F. Allen.

Black Rock, 1843.

THE AMERICAN FARMER.

PUBLISHED BY SAMUEL SANDS.

The Southern Cultivator—Five numbers of a new monthly agricultural paper, of the above name, has been sent us by the publishers from Augusta, Georgia. The selections and original matter reflect great credit upon the industry and ability of its conductors, and we doubt not that they will receive their full share of patronage. It is to be conducted exclusively upon the *cash* principle.

The True Genesee Farmer—The 4th number of an agricultural paper bearing the above title has reached us—It is published at Rochester, N. Y. by Wm. A. Wells. Whether it be the true Dromio or not we cannot say, but of a truth it is a well gotten up sheet and evinces much taste and talent.

Baltimore Co. Agricultural Society's Premiums.

We give place to-day, to the *list of Premiums* to be awarded by the *Baltimore Co. Agricultural Society, at their Cattle Show, Agricultural Exhibition, Ploughing Match and Sale*, to be held at Govanstown, near Baltimore, on the 18th, 19th and 20th Oct. next.

As the reader will perceive, the premiums are as various as they are liberal, embracing almost every interest of the husbandman, and calculated, from their character, to stimulate into action that generous spirit of emulation, which, when once aroused, never fails to produce good results; for the very collision incident to the rivalry of men struggling to excel in a calling like that of agriculture, serves but to call into being the nobler impulses of the heart, whilst indulgence in the grosser feelings, are permitted to the enjoyment of those, whose strife has for its object the furtherance of some wild scheme of unchastened ambition.

We sincerely hope, that the exertions of the society in the promotion of the interests of agriculture, will meet with a warm response from every farmer of our county, and that in each they may find, as they should, a warm and ardent friend. Sure we are, that if the farmers of Baltimore county consult their individual interest, or that of the whole, collectively, they will come forth with unflinching zeal, and prove, by their conduct, that they consider the welfare of the society as identified with their own interests.

Playfair's Lecture on Fattening Cattle—We give the second lecture of Prof. *Playfair*, to-day, and commend it to our readers. Its principles are laid down with such clearness and simplicity, that one forgets while reading it that it is the production of a man of scientific attainments, and is almost tempted to view it as the common sense results of the experience of a life devoted to the practical operations of feeding stock. It is to such professors as the present, that the husbandman must look to have those lights of science shed over his path, which enlighten and instruct without bewildering. If Professor P. does occasionally use the technical phrases of the closet, they are so connected by a train of continuity, thought, and sequence, as to carry with them the key to unlock their mysteries and render their meaning obvious to the least careful reader.

Preparation of Pine for Posts—We saw an account some short time since, of a mode of making *durable posts out of pine*, that seems to us worthy of being noticed. The writer stated, that having no other timber on his place, he had ten years before chopped the bark off of a number of trees of the pine, in the month of June, leaving them standing for the turpentine to be drawn out by the action of the sun; that in the month of November, following, he felled the trees, and worked them up into *posts*, which had then been planted and in use ten years, and upon examining them a few days before the date of his letter, he found them perfectly sound: he believes that he is indebted for the durability of the posts, to the crust of hardened turpentine which had been formed on their outward surface. His supposition may be correct, as it would naturally act as a repellant of moisture, without which, decomposition cannot go on.

Gama Grass.

To the Editor of the American Farmer.

Dear Sir—I have a half pint of Gama Grass seed, sent me by a friend, and small as is the quantity, I estimate it as well worth sowing and taking good care of. I saw some few years ago in some newspaper, I think, some account of an acre of this grass in Alabama, which yielded near three tons of hay at a single mowing, and was mown six or seven times a year, (in that climate)—I have searched your American Farmer for years back, including those published many years ago, and the Albany Cultivator for three or four years back, and can find nothing about Gama Grass—and have to request you, or through you, some of your many correspondents, some information about it, such as, in what kind of soil (wet or dry) should it be sown? at what period? how much seed to an acre? the best mode of making good hay of it? where the seed can be procured? and other information that may be useful to one desirous to raise it and make it beneficial—how to save the seed, and when? how much hay should it yield per acre? how often cut? the cost of the seed? And the same information and description is desired of Lucerne.

Your compliance through your very valuable 'Farmer,' will oblige your subscriber and obt. servt. Wm. Cook.

Describe the seed, their size, shape, color, &c.

Liberty, Bedford co. Va. March 14th, 1843.

REPLY TO THE ABOVE.

The American Farmer is full of information upon the subject of the cultivation and produce of *Gama Grass*—but as our correspondent may, possibly, not have convenient access to the volumes containing it, we will briefly sketch such parts as may be necessary to subserve his purpose, after first answering the questions submitted to us.

Question 1. In what kind of soil (wet or dry) should it be sown?

Answer—It will grow in any soil, and we have seen a very luxuriant crop in a piece of wet meadow land, where it had been placed from necessity; though its growth was very evidently improved by a thorough draining, to which the land was subsequently subjected. The better the soil, the more luxuriant will the grass grow. If we were to select a soil for it, we should choose the richest and deepest loam on our place; for, from the great depth to which the roots penetrate, the rapid growth of the plant, and the frequency of its admitting of being cut, it stands to reason, that it should have all the advantages of depth and richness of soil, and be unstintingly aided by copious supplies of manure. In the preparation of the soil, care must be taken to provide against weeds; and if it be not naturally calcareous, or have been limed, lime should be supplied, as like all other grasses and grains, it delights in that soil best, where lime abounds.

Ques. 2. When should it be planted?

Ans. As soon in the spring as the land can be got in good tilth. Connected with this part of the subject, we would remark, that after manuring the soil *freely*, it should be ploughed as deep as a strong team can well go; that the ground must then be harrowed until a fine tilth is produced, when it must be rolled.

Ques. 3. How much seed per acre?

Ans. We have never seen the quantity of seed allotted to an acre named; but, from an acquaintance with the size of the seed, should presume that half a bushel would be enough. The customary manner and distance of planting, is in rows, 18 inches apart, the plants 12 inches asunder, so that it would take 29,046 seed to plant an acre; but as many of the seed do not come up, we think it best to plant the seed much closer in the row, say, four inches only apart.

Ques. 4. What is the best method of making hay of it?

Ans. Upon this head there is no difficulty whatever, as it is as easily cured as any other grass, and requires no more drying than timothy, orchard grass, or red top. In stacking it away, a peck of salt to the ton of hay, would greatly promote its acceptability to the stock.

Ques. 5. Where can the seed be procured?

Ans. We procured it frequently in Charleston, S. C. where it doubtless can be now procured; but if our correspondent has half a pint of the seed, and it *be good*, we would advise him to make a beginning with that, as should they vegetate generally, they will afford him a good crop of seed next year, besides numerous plants for transplantation, as every *bunch* will bear subdividing, so as to allow him from 20 to 50 roots the succeeding spring, which, with the seed will enable him to set out more than an acre the second year after commencement.

Ques. 6. How often can you cut the hay?

Ans. In Alabama, North and South Carolina and Mississippi, it has been cut as often as seven times in a season, and we should think, that in Bedford county, Va. from four to five cuttings in a season might be calculated upon, of from 15 to 18 inches in height. But to ensure this number, every cutting should be followed by a top-dressing of some good rich compost manure, as mould, or rotten barnyard manure, and ashes, say *ten* bushels of either of the two first, to *two* of the latter, to be worked in between the rows with the hoe.

Ques. 7. How much hay will it yield to the acre?

Ans. This is a question that we are not prepared to answer, as our experience is at fault upon this point; but here our good and respected friend, Dr. *Magoffin*, of Alabama, is a resource to which we can recur with a surety of obtaining the truth. He says, that, "at each cutting a number of the *smallest* branches were weighed, and also of the *largest*. None found less than 5 lbs. and many 15 lbs. and some 16 and 17 lbs. per plant at *each* cutting—and *seven* cuttings in the season." He says, also, that he has dried it into hay at a loss of a little more than one-half in weight—viz. that 14 lbs. of grass gave 6 lbs. dried hay. Now then, if we take the least yield of a bunch or root, that is 5 lb. for our guide, five such cuttings would give us 25lbs. the season per root, of grass; at the rate of loss named by Dr. Magoffin, it would give an aggregate of 10lb. of hay at five cuttings, during the season, for each bunch, so that, as there would be 29,040 bunches on an acre, the acre, at that rate, would yield 290,400lbs. of hay; but suppose we take the fourth of that quantity as the probable product, and we have 36¼ tons as the yield of the acre—and if we carry the reduction still further, and take the fourth of 36¼ we will still have above 9 tons to the acre—if however we take Mr. Magoffin's minimum of

5lbs. to the bunch, we get the incredible quantity of 145 1-5 tons. That it is the most productive grass in cultivation, when properly cared for, we have no question; that it is eminently calculated for a warm climate we are equally certain, and believe also, that it will be well relished by all kinds of stock, if cut before it becomes too rank. When intended for hay, it should be cut at least once a month, the first cutting to take place when the grass may be 15 inches high. But as our correspondent and every other intelligent reader will admit, to get the most out of this grass, it must be grown under the most favorable circumstances of situation, soil, preparation of soil, cleanliness of culture, and heavy manuring. The soil in which it may be grown, should have lime in it; be heavily manured before ploughing, be moderately top-dressed after every cutting; the weeds must be kept down by hand and hoe-weeding, and the ground be kept open to the influence of the elements.

The seed in the outside covering are somewhat the shape of castor oil beans, though much smaller, of a dusky yellow cover.

In preparing them for planting, they should have four times their quantity of hot water poured over them, and be permitted to remain therein for forty-eight hours, when they may be planted in a bed in rows 18 inches a part, the seed to be drilled at 12 inches asunder. When they first come up, they look like corn. They must be kept clean of weeds and other intruders by hoeing and hand-weeding the first season.

It may be said to be a matter of great labor to set a meadow with Gama grass, and so it is; but when one reflects, that when once set, it will last for 70 years, and that one acre will give as much hay as *ten* set in any other grass, the *trouble*, *labor* and *cost* should not be permitted to preponderate against the manifold advantages which belong to its culture.

Now what would be the labor attending the setting of an acre, the plants being grown? Not much more than planting an acre in corn. With two boys, ten years old, with the plants in baskets, to drop them in the furrows, 12 inches apart, and two men to cover with the hoe and press the earth with its back, we would agree to plant out an acre in a day, and when this would be done, we would indulge in the comfortable reflection, that we had perfected a work which would last for three-score years and ten; that both ourself and our children were secured in hay for our stock during our lives. Notwithstanding the immense yield of this grass—notwithstanding its long continuance—notwithstanding it is nutritive to, and relished by, stock, of all kinds, such is the aversion of the great body of agriculturists to incurring any *extra* labor, that we fear it never will be successfully introduced. Again, we have heard the objection raised against it that it required to be cut too often—or, in other words, that it was too productive; for the objection resolves itself into this, let it be twisted as it may.

So far as our personal knowledge of this grass extends, we think that it delights in a warm climate, and that, probably it could not be cultivated to advantage in the Northern and Eastern States. To the Southern States we look upon it as a God-send, as it would, if its culture were generally attended to, enable their planters to amply supply themselves, not only with grass for soiling their stock thro' the summer, but with abundance of good provender for winter.

FREAKS OF NATURE—I learned from E. Culver of Wells, that a neighbor of his, Mr. Halsey Goodrich, had two heifers that brought each other to milk at one year old; one of them was milked three consecutive years before she had any offspring. Also, Mr. Joseph Button, now a resident of Chautauque co. N. Y., had a calf estray from his yard at about two weeks old, which accompanied another heifer calf between 4 and 5 months old, and by the constant sucking of the younger calf, brought the elder to milk within the space of six weeks.—*Cor. Alb. Cul.*

Mr. *David Stuart*, of this city, owns a fine Durham cow, raised by Mr. M'Clellan, of Gettysburg, which for twelve months before she had her first calf gave a fair sup of milk, and was regularly milked with the other cows twice a day. Whether she was brought to her milk by the same means as the two heifers named above we cannot say, and only mention the fact, to shew, that there are other instances beside those contained in the above paragraph, and to introduce a still more singular one, in the person of a very old woman. Some eight or ten years ago, there lived in this city an old lady, fully *seventy* years of age. Her youngest daughter, who was married and lived with her, was in delicate health, so much so, that her physician directed that the child should be weaned, as the only means of saving its mother's life. The grandmother undertook the charge of nursing and weaning, and the more effectually to effect her purpose, took the child to sleep with her. The child being strong and of keen appetite, sought to find in the withered bosom of its grandmother, that delightful nectar of life, to which it had been accustomed ere it was exiled from its mother's arms. Disappointment, of course, was the reward of its pains at first, but, by dint of perseverance, it ultimately succeeded in restoring the old lady to her milk, and she had the pleasure not only of suckling her little grandson, but of performing the same office to the succeeding child of her daughter.

SAGACITY AND AFFECTION OF A HORSE—The Charlottesville (Va.) Advocate of the 8th inst. gives the following account of the sagacity evinced by, and affection manifested for, his owner, by a horse. In reading the account, one is at a loss whether to refer the sagacity to reason, or to instinct; but sure we are, that whether it be the result of the one faculty or the other, man, with all his self-assumed superiority over the animal kingdom, could not have evinced a feeling more akin to the holiest affection than that displayed by the horse in question:

"The following incident narrated to us by a friend who witnessed it is a striking evidence of the value of that noble animal—the horse. On Sunday evening last our informant, in company with a friend, whilst walking a short distance from town, on one of our public roads, had his attention arrested by a horse who was standing very cautiously on three legs, and over the prostrate body of his rider, who, in a fit of intoxication, had fallen from his seat to the ground, and in such a position as to present his breast to the uplifted fore foot of the animal. Approaching cautiously it was perceived that the horse's position was a very uncomfortable one. He was standing with obvious uneasiness on three feet, with the other carefully raised from the body of the man, whilst occasionally, as if in search of some rest for it, he would gently lower his foot until it came into contact with the body, when he would immediately raise it again. He stood perfectly still until his master was rescued from his perilous position, when he placed his foot on the ground, to his obvious relief."

For the American Farmer.

GUANO.

Will the editor of the American Farmer oblige many of his subscribers, by giving them some information in regard to the use of the new fertilizer called *Guano*.

But little practical experience has been had of it in this country, tho' in England—to which country large quantities have been exported for some years past—it has been used very extensively. It has been stated to be a good manure for potatoes, as a top dressing for grass, and for fruit trees; but information is wanted of the quantities applied, and the mode of application, &c. &c.

Some of your exchanges will no doubt yield the desired information. Respectfully, yours, &c.

Baltimore, March 22d, 1843.

The following article will be sufficient to test the value of this manure.

Experiments in the Guano.—The substance called Guano having attracted much attention in England as a manure, as well as excited a considerable degree of interest amongst many intelligent cultivators of this island, I instituted a series of experiments at the Kirk Onchan nursery on its fertilizing properties.

Guano, it may be as well to premise, occurs as a deposit, of very considerable thickness, on various small rocky islets off the coast of Peru, ranging from the 13th to the 21st degree of south latitude. Its origin has been a subject of fanciful speculation, but it is now certainly known to be the excrement of peculiar kinds of sea-fowl; which, feeding on fish, and visiting these islands in flocks dense enough to obscure the light of the sun, have accumulated their droppings to an extent that seems almost incredible—the accumulations attaining, it is said, the thickness, in some places, of 300 yards.—Vast quantities of this manure are used by the Peruvians for all kinds of crops.

It will not be necessary for me to detain you with a particular account of the constituents of Guano as ascertained by chemical analysis. According to the views of Liebig, and others almost equally celebrated in the agricultural department of chemistry, its fertilizing effect is to be attributed to the nitrogen it contains, in the form of ammoniac and uric acid, (the latter giving use by its slow decomposition to the former,) and also, but secondarily, to the phosphate of lime, which furnishes many plants with matters essential to their healthy growth. After this short preliminary detail, which it was thought might posibly interest some of the members of the society, I proceed to give an account of the experiments with Guano at the Kirk Onchan Nursery.

On a soil there of a light and poor nature, which would most decidedly deserve the name (to use the language of the farmer) of a hungry soil, were growing and still grow, two patterns of grass—one of Stickney's rye-grass, mixed with small quantities of holcus lanatu (woolly soft grass) and poa trivialis, the other of Italian rye-grass. A space was measured off from each of these patches, and on the 12th of May last both the spaces so measured off were top-dressed with Guano, with great care, at the exact rate of three cwt. per acre.

On the 20th of June following, one square yard of the dressed and undressed spaces, taken as fairly as possible, was cut and carefully weighed in the presence of Lawrence Adamson, Esqr. of Douglas, who had taken great interest in the experiments.—The following were the results:—

FIRST EXPERIMENT.

Stickney's rye grass, and small quantities of Holcus lanatus, and Poa trivialis.

Of one square yard, dressed with Guano at the above rate, the produce weighed,	7¼ lbs.
Of ditto not so dressed,	2¾

SECOND EXPERIMENT.

Italian rye-grass.

Of one square yard, dressed with Guano as above, the produce weighed,	10½ lbs.
Of ditto not dressed,	4¾

The Guano was also applied at the same time (12th of May,) and at the same rate, to a row of young elms, and on the the 20th of June this row could be distinguished, even at a considerable distance, from the others, by its deep and healthy green, and more free and vigorous growth.

The Guano was also applied to a row of larches with precisely similar effects, the neighboring row dicidedly partaking of the benefit of the application.

On a row of strawberries, and the neighboring rows, effects similar to the last were produced.

The Guano has also been applied, after the above rate, to different kinds of potatoes, to Swedish turnips, to Mangel Wurzel, and other vegetables, in competition with dung. The growth produced by the Guano has, in all the cases, been exceedingly healthy and vigorous, but it is yet too early to give the complete comparative results.

In the mean time, I have this day produced to the society, specimens of turnips and mangel wurzel, as grown on each manure.

The extraordinary consequences of the experiments on the grasses seem (it is most respectfully submitted to the society) to leave little doubt of the excellence of the Guano, as a top-dressing for the general run of land under grass for hay. THOMAS LYLE.

Onchan Nursery, August, 1842.

The report was listened to with much attention, and loudly cheered on its conclusion.—*English Paper.*

Cutting Potatoes.—Some farmers still strenuously contend that slips are as valuable to plant or propagate from as whole potatoes; but our experience has produced in our mind a conviction that they are not. It is nevertheless true, that where one is short of seed, or when the difficulty of procuring a sufficiency is great, or where one has a new variety, which he is desirous of "making go" as far as possible,—cutting may be expedient, because it is prompted by necessity. But if a farmer has a plenty of potatoes, whole ones, of medium size, should be used for seed. This, we think should be the standing rule. No one selects his smallest ears of corn for seed. Why, then, should we not adopt the same principle in selecting seed potatoes? As to cuttings, or *"seed-ends,"* as they are generally demoninated, by farmers, they are not, in our opinion, worth planting when whole potatoes can be obtained at the usual price. It has been asserted, that by following this process, the best and most valuable variety, may be wholly 'run out,' in the course of a few years It is a good principle always to select the best for seed; propagate from your finest specimens, whether animal or vegetable, and preserve the rest for use or sale.—*Maine Cultivator.*

Hints for Hard times.—Rise early in the morning, be diligent during the day, in attending to our business, and not worry ourselves with our neighbor's concerns.

Give encouragement to home industry and in all give the preference to American manufactures over foreign in every case.

Instead of following the fashions of Europeans, let a spirit of independence be cultivated, and decide for ourselves how our coats, boots and hats shall be made.

Keep out of the streets, unless business calls us to transact that which we cannot do in our shops or dwellings.

By all means keep away from drinking and gambling houses.

When we buy an article of clothing, study commendable economy, at the same time get a good article, and wear it out regardless of any change of fashion—fashion is a great tyrant, and men are fools to be slaves to it.

Stay home at nights, improve yourselves by reading, writing, or instructive conversation, and retire to your beds at an early hour.

Be kind to your relations, obliging to our friends and charitable to all.—*Maine Cultivator.*

The season will be productive.—An old farmer of Worcester county says that in the year 1785, the snow held to the depth of four feet till the 20th of April. It then suddenly thawed off and summer came on directly; and no year within his remembrance before or since has equalled that for productiveness. Taking that as a precedent, we have abundant reason to anticipate a fruitful season, to compensate for the rigors of a backward spring the present year.

BALTIMORE MARKET.

Hogs.—Live hogs have been plenty during the week and prices have declined materially, the sales this week have ranged from $3 for inferior to $3,75 per 100 lbs for very prime. We quote now at $3a3,50.

Cotton.—We note sales of 50 bales Louisiana at 8 cts. 6 months; of 350 bales Alabama at 7 1-8 cts on time; of 160 bales ditto at 7 cts cash; and of 150 bales Louisiana at 6 5-8a7 cts cash.

Clover seed.—There has been but little Cloverseed in market during the week and the price has considerably advanced. Sales of strictly prime quality in small parcels have been made at $5 and of fair at $4,50 per bushel.

Flax seed—Limited sales have been made from store at $1,25 per bushel.

Timothy seed.—We note a sale of a large lot at $1,87½ per bushel and quote to-day at $1,87½ to $2,25 as in quality and quantity.

Molasses.—New Orleans in bbls is held at 23 cts. Offers of 22 cts refused.

Tobacco.—There has been a manifest improvement in the receipts this week, which induced a better feeling on the part of shippers for all descriptions of Maryland Tobacco, and particularly for good and fine qualities. Prices are considered a shade better, but the improvement, although decided, is still within the range of our quotations. The demand has been quite active, and the sales of week considerable. We quote inferior and common Maryland $2,50a3,50; middling to good $4a6; good $6,50a8; and fine $8a12.—Ground Leaf, except of very good quality, is much neglected. We quote inferior and common at $3a4; and middling to good $5a7. The stock of Ohio is very light, and the demand at present limited. We quote as follows:—common to middling $3a4,50; good $5a6; fine red and wrappery $6,50a10; fine yellow $7,50a10 and extra wrappery $11a13. The vessels now loading with Tobacco are charging 30 shillings freight to Bremen and 35s to Holland. The inspections of the week are 630 hhds Maryland; 15 hhds Ohio; and 8 hhds Kentucky—total 653 hhds.

Sugars.—At auction on Tuesday, 160 hhds Porto Rico, cargo of brig Giraffe, were sold at $6,50a7,30, and 89 hhds ditto, cargo of schooner Susan Taylor, were sold at $6,05a6,30. At the same time 29 hhds New Orleans were sold at $4,95a5,05. We note sales of 150 hhds New Orleans, by public and private sale, at an average of $5,25.

Cattle—There were 560 head of Beef Cattle offered for sale at the Scales this morning, which is an unusually large number for the season of the year—Prices ranged a shade lower, and the sales to the city butchers embraced about 300 head, at $2 for inferior to $2,87½ per 100 lbs. on the hoof for prime quality, which is equal to about $4a5,25 net. The sales at either of the extremes were small however, the bulk of the cattle being taken at intermediate rates. Of the balance 160 were driven North, and 100 remain in the market unsold.

Flour—Sales of two or three parcels of Howard street Flour of good mixed brands were made from store this morning at $4,25. The demand is not active, other parcels having been offered at the same price, and refused. We quote the receipt price at $4,12½.

No sales of City Mills Flour. Holders ask $4,25.

We note sales of 200 bbls Susquehanna Flour at $4,28; and 400 bbls at $4,31½.

Grain—The receipts of Md. Wheats continue very light. We quote good to prime reds at 90a95 cents. A sale of 1000 bushels Pennsylvania red, quality not prime, on Saturday at 96 cts for shipment—Sales of Md Corn at 51a52 cts, for white and yellow.—Sales of Oats at 26a28 cts.

Provisions—Lard has advanced and we note sales of No 1 Western in kegs at 6½ cents, at which price holders are now very firm. The stock of the article is much reduced and is now in but few hands. We are not advised of any sales of Beef, and quote as before: Baltimore Mess at $8,50a9; No 1 at $7a7,50; and Prime at $5a5,50. The last sale of Baltimore Mess Beef was at $9,50; and of Western at $9. There is now a very limited stock in market.—Bacon continues to sell pretty freely at the last quoted prices, viz: Western assorted at 4½a4¾ cents; Hams at 6a6½ cents; Sides at 4¼a4½ cents; Shoulders at 3½a4 cents; Baltimore cured Hams at 7a7½ cents, Sides at 4¼a4½ cents; and Shoulders at 4a4¼ cents.

POUDRETTE.

PRICES REDUCED for this valuable fertilizer.

The New York Poudrette Company, having enlarged their works have now on hand a good supply of a first rate article, which they offer in parcels of *ten* barrels or more at $1,50 per barrel, or *three* barrels for $5—delivered on board of vessels.

☞ Orders, enclosing the cash, will be promptly attended to if addressed to D. K. MINOR,
118 Nassau street, N. Y.

N. B. The farmers of Maryland, who reside near navigable water, will do well to enquire into the value of Poudrette as a manure. Those who have used it need no argument in relation to its value—and the best evidence which those, who have not used it, can have is to procure a few barrels and apply it to their Corn, Tobacco, Melons, &c.—*Seeing is believing.* feb. 1

The subscriber is Agent for the above Company, and will receive and forward orders for Poudrette, at the prices named above; cost of freight and any other necessary expenses being added. The cash in all instances to be paid when the order is left. Gentlemen in the country who cannot receive it direct from N. York, will have it forwarded from this port in any manner they may direct.
feb. 1 SAML. SANDS.

PLOUGHS.

WITHEROW & PEIRCE'S PATENT CYCLOIDAL PLOUGHS

With wrought iron shares and steel cutters, to which the Baltimore County Agricultural Society awarded the premium for the best furrow plough, at their ploughing match in November last.

For sale by ABRAHAM BUCKWALTER, 277 West Baltimore street Baltimore.

P. A. & S. SMALL, York, Pennsylvania.

And by the subscriber in Gettysburg, Adams Co. Pa.
S. WITHEROW.

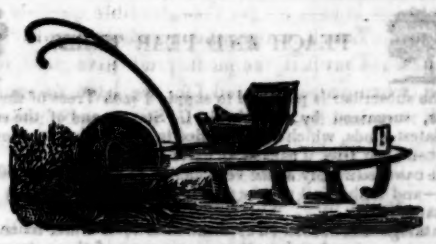
The subscriber also proposes to sell on reasonable terms, Shop rights, Township, County, or State rights, to make and vend the above ploughs. S. W.
feb. 1 7t*

TO AGRICULTURISTS AND OTHERS.

THE SUBSCRIBER, with the assistance of WM. BAER, Esq., Practical Chemist and Agriculturist, will analyze *Soils, Minerals, Earths* and *Waters.*

AGRICULTURISTS can have their soils visited and analyzed by the year or single analysis.

AGRICULTURAL SOCIETIES can be accommodated with a course or single lecture on AGRICULTURAL CHEMISTRY by WM BAER. Apply at JAMES W. SCOTT'S
Drug and Chemical Store,
feb. 8 1y 150 Baltimore street.



DRILL MACHINES.

There are several Drill Machines made similar to the above figures for planting Corn, Cotton, Beet Seed, Peas, Turnip Seed, &c. which are sold at various prices.

Page's Iron Drills, as represented by above figure, is probably the best for field drilling, and is sold at $25
Other sorts for gardeners, . . 10a15

CORN SHELLERS, CRUSHERS, STRAW CUTTERS, &c. &c.

☞ *Prices reduced in proportion to the present rate of labour and materials.* ☜

The *subscribers* offer for Sale, *Goldsborough's Corn Sheller* and *Husking Machine,*—warranted to shell or husk and shell 700 bushels of Corn per day by the power of two Horses.

Baldwin's Corn Sheller with *blower* attached.—This machine with the power of two horses will shell and clean ready for market 400 bushels of corn per day.

Baldwin's Corn & Cob Crusher,—warranted to grind 25 or 30 bushels of Corn & Cob per hour, and put in fine order for feeding stock. This is the most durable, simple in construction, and most powerful of any Crusher made in this Country, and best adapted for extensive farming establishments. The power of two horses is required to drive it.

Straw Cutters, Cylindrical Improved—There are four sizes of these machines, which combine all the late impravements;—400 to 2000 bushels of hay, straw, cornstalks, &c. can be cut by them per day Also, common Treadle, Evans' patent, and several other kinds STRAW CUTTERS, at low prices.

IN STORE,

Horse Powers, 2 sizes	Harrows, 5 kinds
Threshing Machines, do	Rollers and Drill Machines
Vegetable Cutters	Yankee Ox Yokes
Fanning Mills, 2 sizes	Harvest Tools, all kinds
Churns, 3 sizes	Post hole Augurs
Lime Spreaders	PLOUGHS, 25 sorts, embracing
Grindstones, hung on friction rollers	the Subsoil, and several other kinds of late introduction

Garden and Field SEEDS, a large and general assortment
TREES and PLANTS do do

CATALOGUES of the above furnished gratis, giving prices and description of each machine—also directions for planting seeds, trees, &c. R. SINCLAIR, jr. and CO.
no 30 Manufacturers & Seedsmen, 60 Light st.

FOR SALE.

A handsome thorough bred DURHAM BULL, about 6 or 7 months old, from very superior stock. Price $65, deliverable in Baltimore—Apply to SAM. SANDS.
Jan. 18.

FOR SALE—SHEEP AND HOGS.

Two Bucks, NEW LEICESTER breed, 1 year old this coming spring—and one Ewe, same breed, 2 years old. Also, 2 pairs of SOUTH DOWN Sheep, about 2 years old. Price for the Rams, 20—for the Ewes, $15. S. SANDS.

STANDISH'S AMERICAN GLOBES.

The subscriber has been appointed agent for the sale of these useful and beautiful articles, they are in sets or pairs of three sizes 12, 10, and 6 inch.

THE TERRESTRIAL GLOBES,

Exhibit the boundaries of Empires, Kingdoms, and States, as they were settled and laid down: comprising also the recent discoveries of Perry, Burrows, and Ross in the Arctic Regions, and those of Denham, Clapperton, the Landers in Africa together with exploring voyages elsewhere.

THE 12 INCH CELESTIAL GLOBE,

Is compiled from the works of the most celebrated Astronomers, and the transactions of the Astronomical Society of London. It contains the new constellations—all the known stars to the ninth magnitude, each star is numbered or otherwise designated according to the most approved Astronomical tables, with their location corrected from the late observations of the younger Herschal, the Nebuleas, the variable, double, triple and quadruple Stars are also laid down. The 10 inch Celestial globe contains all the stars to the sixth magnitude, numbered as above, the 6 inch. Do. to the fifth Do.

Price of the 12 inch. per pair, with strong apple-tree stands. $18,00
" Ten inch. Do Do Do 14,00
" Six Do. Do Do Do 7,00

The above described globes have invariably taken premiums wherever they have been exhibited for competition; the engraving is executed in a very superior style: they will be forwarded to any part of the United Stated, carefully packed by applying to the manufacturer Z. STANDISH, Albany, N. Y., or his agent, the subscriber at Baltimore.
March 1, S. SANDS.

PEACH AND PEAR TREES.

The subscriber is prepared to supply Peach Trees of the choicest kinds, surpassed by none in the U. States, and of the earliest to the latest kinds, which he is enabled to sell at the very low rate of 12½ cents per tree, if packed an extra charge.

He can also supply a few very choice Pear Trees at 50 cts. per tree—and in the Fall will be able to furnish any quantity requisite of many kinds.

Catalogues furnished on application at the Farmer office. Entire reliance may be placed on the genuineness of these trees, and of their being of the choicest kinds. ap 12 S. SANDS.

A SITUATION AS OVERSEER,

Is wanted by a single man, who can produce the highest testimonials of character and ability, and who would be willing to go to any part of Maryland or the neighboring states. He could enter upon his duties immediately. Apply to S. Sands, at the office of the American Farmer. ap. 12 3t*

EASTMAN'S NEWLY INVENTED PLOUGH WITH CONCAVE LANDSIDE, AND DOUBLE SHARE.

The subscriber has just invented a PLOUGH, with the above named peculiarities, viz: *with a concave Landside and double share.* The advantages to be derived from these improvements are expected to be as follows:—1st, That it will be kept in repair at considerable less expense than other Ploughs in use:—2d, That it will run more level either in deep or shallow ploughing:—3d, He believes that it will run much lighter to man and horses than any other Plough in use. With these advantages they are offered to the public, and if they are not realised to the purchasers after two days use, or they are not satisfied with them, they are requested to return them and receive their money back. The only size I can furnish at present is a large two horse Plough, the size of the Davis' 10 inch, as made by me. J. S. EASTMAN,

Pratt street, between Charles and Hanover sts.

LIME—LIME.

The subscriber is prepared to furnish any quantity of Oyster Shell or Stone Lime of a very superior quality at short notice at their Kilns at Spring Garden, near the foot of Eutaw street Baltimore, and upon as good terms as can be had at any other establishment in the State.

He invites the attention of farmers and those interested in the use of the article, and would be pleased to communicate any information either verbally by or letter. The Kilns being situated immediately upon the water, vessels can be loaded very expeditiously. N.B. Wood received in payment at market price.

ap. 22 3m E. J. COOPER.

LIME FOR AGRICULTURAL PURPOSES.

Having accumulated a large stock of first quality Oyster Shell Lime, at my kilns on the Potomac River, I beg leave to say to the Farmers and Planters generally, and more especially to those who are anxious to improve their lands, and have been deterred from doing so by the scarcity of money and low prices of their produce, that I will sell them lime, delivered on board of vessels at the kilns, either at Lancaster's Tide Mill, near the mouth of the Wicomico River; Lower Cedar Point, or Pickewaxin Creek, at 6¼ Cents per bushel, payable March 1st, 1844, (if ordered, deliverable between this date and 1st of August next,) or I will deliver it on the above terms, charging in addition the customary freight, which must in all cases be cash. Orders addressed to me, at *Milton Hill Post Office, Charles County, Md.*, will receive prompt attention rom WM. M. DOWNING.

ja 25 6m

TO FARMERS.

The subscriber has for sale at his Plaster and Bone Mill on Hughes street, south side of the Basin, GROUND PLASTER, GROUND BONES, OYSTER SHELL & STONE LIME, and LEACHED ASHES, all of the best quality for agricultural purposes, and at prices to suit the times.

Vessels loading at his wharf with any of the above articles, will not be subject to charges for dockage or wharfage.

fe 23 WM. TREGO, Baltimore.

MARTINEAU'S IRON HORSE-POWER

The above cut represents this horse-power, for which the subscriber is proprietor of the patent-right for Maryland, Delaware and the Eastern Shore of Virginia; and he would most respectfully urge upon those wishing to obtain a horse power, to examine this before purchasing elsewhere; for beauty, compactness and durability it has never been surpassed.

Threshing Machines, Wheat Fans, Cultivators, Harrows and the common hand Corn Sheller constantly on hand, and for sale at the lowest prices.

Agricultural Implements of any peculiar model made to order at the shortest notice.

Castings for all kinds of ploughs, constantly on hand by the pound or ton. A liberal discount will be made to country merchants who purchase to sell again.

Mr. Hussey manufactures his reaping machines at this establishment. R. B. CHENOWETH,

corner of Front & Ploughman sts. near Baltimore st. Bridge, or No 20 Pratt street. Baltimore, may 31, 1841

DEVON CATTLE.

The undersigned have a herd of about five and twenty full blood North Devon Cattle, embracing all ages and both sexes, which have been selected and bred with care for several years past, and being overstocked would dispose of a part of them. Orders for any of them will meet with attention. Address

JOHN F. E. STANLEY,

No. 50 S. Calvert St. Baltimore.

PRICES TO SUIT THE TIMES.

A. G. MOTT & CO. corner of Forest and Ensor sts., and corner of Wood st. and Bowly's wharf, manufacture and have for sale Agricultural Implements of various kinds—consisting in part of WHEAT FANS, GRAIN CRADLES, SCYTHES, MOWING SNEATHS, CORN SHELLERS, HAY & STRAW CUTTING MACHINES, CORN & TOBACCO Cultivators with wrought and cast tines, or hoes; the castings of the N. York composition metal. The celebrated endless chain Horse power & Thresher, single and double shovel ploughs, Harrows of various kinds.—Also a variety of Ploughs among which, being the only agents in this State, is the renowned WILEY, the castings for which are from the North, and are the best and most durable in the country, one share wearing as long as two of the Baltimore make. At the great Ploughing Match, during the last annual meeting of the Baltimore County Agricultural Society, the WILEY took the sweepstake, by acclamation, having for competitors, ploughs from the different Factories in this city,—also from Pennsylvania, New York and Ohio, among which was the Messrs. Witherow & Pearce's Cyclodel Plough of Gettysburg, Pa. This Plough is so constructed that with it the farmer is his own smith. The double pointed shear is confined to the mould-board by a cap—the shear when one point wears dull, can be reversed by unscrewing the cap and throwing out the other point. The prices for the No. 3, a 7 inch seeding plough, $4,50—No. 4, an 8 inch, $5,25—No. 56, a 10 inch, $8—No. 76, $9—No. 84, 10. The following practical farmers residing in Baltimore Co. are a few of those who use the WILEY ploughs exclusively, and pronounce them the cheapest and best which they have ever used, viz:

Hon. J. T. H. Worthington, Elisha Johnson,
John Johns, Richard Johns,
Thos. T. Griffith, Edward Philpot, &c.

Also a choice selection of FIELD AND FLOWER SEEDS, which are warranted fresh and genuine. mh 29

BARNABY & MOOERS' PATENT SIDE-HILL & LEVEL LAND PLOUGH.

To which was been awarded the following and Several other Premiums, viz.—By the American Institute, at their Ploughing Match at Newark, N. J. 1842, the First Premium, a Silver Cup—and at their Annual Ploughing-Match for 1841, at Sing Sing, N. Y. a Gold Medal for the best work done, lightest draught, and best principle of construction.—answering for "general purposes" The N. York State Agricultural Society, awarded it an Extra Premium of $30, at their Annual Ploughing-Match at Syracuse for 1841.

The following are its advantages over the Common Plough, viz.—1st. Ease of Draught—2d. Perfection of Work—3d. Strength and Durability—4th. All Dead Furrows may be prevented, as the Furrows can all be turned one way—5th. Any width of Furrows may be turned, between 8 18 inches, by moving the catches in the cross piece towards the handles for a wide Furrow,—and towards the centre for a narrow one—6th. Placing the beam in the centre of the cross-piece, makes it a "Double Mould-Board Plough," turning a Furrow both ways at the same time,—answering for Green-Ridging, Ploughing between Corn and Potatoes, or any any crop cultivated in rows or drills,—and for Digging Potatoes.

The subscribers having purchased the Right to Manufacture the above celebrated Ploughs, for the State of Maryland, are now prepared to furnish Farmers with the same,—and they pledge themselves to the Public, to manufacture this Plough in the Very Best Manner, both as to materials and workmanship. ☞All Orders will be thankfully received and punctually attended to.

☞Price as Follows, (adding Transportation.)—No. 2, 45lb. at $7. No. 3, wt. 70 lbs. $10—No. 4, 80 lbs. $11—No. 5, 90 lbs. $12. Extra edge, 50 Cents. For Colter, if added, laid with steel, $1.50. Wheel, $1,50. Shin Pieces, 12½ Cents.

DENMEADS & DANIELS, corner Monument and North-sts. who having purchased Mott & Co's interest, are now sole owners.

B. H. WILSON, No. 52, Calvert st. 1 door below Lombard, is Agent for the sale of the above Plough. Baltimore, Nov 23, 1842

HUSSEY'S REAPING MACHINE.

Farmers are respectfully requested to send their orders as soon as they shall have decided on procuring machines to cut the next year's crops by doing so, they will enable the subscriber to make preparations early in year with confidence, so that none may be disappointed at harvest time, as has been the case for several years past by delaying to apply for them in season. His former practice will be steadily adhered to of making no more machines than are ordered, lest a failure of the next years crop should leave a large number on his hands, unsold, which his circumstances will not allow. It is hoped that the great success which has attended the machines made for the last harvest will remove every doubt of their great value. Several persons have cut as high as 20 acres in a day with the last improved machines, while one gentleman with one of the old machines cut his entire crop of 72 acres in less than five days, without having a cradle in the field.

The greatest objection ever made to the machine was its heavy bearing on the shaft horse; this has been entirely removed by adding a pair of forward wheels to support the front of the machine, and a driver's seat at an extra expense of 20 dollars.

CORN & COB CRUSHER

The subscriber's Corn & Cob crusher which obtained the first premium over several competitors at the late Fair of the N. York State Agricultural Society held at Albany, N. Y. and is so highly recommended in the public prints, by farmers who have used them, will be kept constantly on hand for sale.

OBED HUSSEY

AGRICULTURAL MACHINERY & IMPLEMENTS.

The subscriber begs leave to assure the public that he is prepared to execute orders for any of his agricultural or other machinery or implements with promptness. His machinery is so well known that it is unnecessary to describe the various kinds, but merely annex names and prices:

Portable Saw Mill with 12 ft. carriage, and 24 ft. ways and 4 ft. saw,	$300
Extra saws for shingles, with 3 pair of head blocks,	125
Post Morticing Auger,	15
Bands,	10
Horse Power of great strength,	200
Corn and Cob Crusher, wt. 600 lb.	65
Thrashing Machine, wt. 300 lb.	75
Corn Planter, wt. 100 lb.	95
Thrashing Machine, wt. 600 lb.	150
Grist Mill, 2½ ft. cologne stones,	150
Do. 3 ft. do.	175
Belts for the same,	15
Post Auger, wt. 15 lbs.	5
Tobacco Press complete, portable,	85
ortable Steam Engine, with portable Saw Mill and cutting off Saw,	3500
Large Sawing and Planing Machine with cutting off saw, or cross cutting for large establishments,	1100
If made of iron,	3000
Large Boring and Morticing machine for large establishments	150
Tenoning Machine	200
Vertical Saw	125
Small Morticing Machine, suitable for carpenters,	25

All of which articles are made in the most superior style of workmanship, of the best materials, and warranted to answer the purposes for which they are intended. It cannot be expected that the subscriber can speak of the merits of the above enumerated articles within the compass of an advertisement. Suffice it to say, that each have found numerous purchasers, and proved entirely satisfactory. The Portable Saw Mill with a 10-horse power engine, can cut, *with perfect ease*, 10,000 feet of lumber a day, and, if necessary, could greatly exceed that quantity.

GEORGE PAGE,

West Baltimore street, Baltimore, Md.

☞Pamphlets containing cuts with descriptions of the above named machines, can be had on application (if by letter post paid) to the subscriber, or to Mr. S. Sands, at the office of the American Farmer. sep 1 tf

MILLWRIGHTING, PATTERN & MACHINE MAKING

By the subscriber, York, near Light st. Baltimore, who is prepared to execute orders in the above branches of business at the shortest notice, and warrants all mills, &c. planned and executed by him to operate well.

Murray's Corn and Cob Crushers for hand power	$25
Do. by horse power, from 6 to 12 bushels per hour,	35to40
Corn Shellers, shelling from 30 to 300 bushels an hour,	15to75
Portable and Stationary Horse Powers	75to150
Self-sharpening hand Mills, a superior article,	12 to 20
Cylinder Straw and Oat cutters, 2 knives,	20a35
Mill, carry log, and other Screws, 2 small Steam Engines	3 to 4 horse power.

Any other machines built to order.

Patent rights for sale for the Endless Carriage for gang Saw Mills, a good invention.

☞Orders for crushers can be left with any of the following agents: Thos. Denny, Seedsman, Baltimore; J. F. Callan, Washington, D. C.; Calvin Wing, Norfolk; S. Sands, Farmer office; or the subscriber, JAS. MURRAY, Millwright, Baltimore.

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BENTLEY'S AGRICLTURAL STEAM GENERATOR

MANUFACTURED BY BENTLEY, RANDALL & Co.,

Manufacturers of *Bentley's Convoluted Steam Boilers*, Baltimore, Md. for steaming Corn Stalks, Hay, Potatoes, Boiling water, &c It is also highly recommended to Tanners for steaming Leaches, also for various manufacturing and mechanical purposes, where steam or large quantities of hot water is required. This article is made wholly of iron, and was got up expressly to meet the wants of the Agricultural community, and it is confidently believed that for simplicity, durability, economy in money, fuel, time, and room combined its equal has not been offered to the public. It possesses all the principles of the most approved Tubular Locomotive Boilers, for saving of fuel, while the construction is such that one of equal size, strength and durability that has heretofore cost $100, or more, is now offered at $45. It is operated equally well with Anthracite coal as with wood, and can be removed by two persons at pleasure.—Prices No. 1 $45, considered of capacity enough for ordinary Farm purposes; No. 2 $60, No. 3 $75.

BENTLEY, RANDALL & Co.

McCausland's Brewery, Holliday, st. near Pleasant.

We have the liberty of referring to the following gentlemen, viz:—David Barnum, Esq City Hotel; Captain Jackson, warden of the Maryland Penitentiary, and Doct. Robt Dorsey of Edw., where they can be seen in operation.

Agents, J. F. Callan, Esq. Washington City; Capt. John Brooks, Upper Marlboro', Prince Georges' Co. Md. where samples can be seen. For numerous testimonials in favor of the above call on the manufacturers or their agents.

N. B. B. R. & Co., are also agents for Murray's Corn and Cob Crushers. Balto. Md., Dec. 1842.

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BERKSHIRE PIGS.

The subscriber offers for sale Berkshire Pigs, 2 to 4 months old, from the piggery of Messrs. Gorsuch, and others of the best breeders in Maryland, at $12 1-2 deliverable in this city, or $15 caged with feed for any port on the coast of the U.S. m 29 S. SANDS

AN IMPORTED LARGE JACK, FOR SALE.

He can be warranted as a sure foal getter, and will be sold at the very low price of $250, deliverable in this city. Apply to

fe 22 S. SANDS